

IN THE CLAIMS

1-21 (Canceled)

22. (Currently Amended) An apparatus, comprising:

a rotatable wafer-holding mechanism to hold a wafer having a front surface, a back surface and a side;

a solvent dispense head in fluid communication with a source of a photo resist solution and in fluid communication with a solvent source containing a solvent that includes diacetone alcohol and aliphatic ester, wherein the solvent head includes:

a first nozzle directed at the side edge ~~and sides~~ of the wafer;

a second nozzle directed at the back surface of the wafer; and

a third nozzle directed at ~~the~~ a center of the front surface of the wafer; and

~~a rotatable wafer holding mechanism; and~~

a logic control unit to execute a process to coat a wafer, wherein the process comprises:

~~dispensing the solvent on a wafer surface, including dispensing the solvent from~~
the third nozzle to prewet the front surface of the wafer;

actuating the rotatable wafer-holding mechanism to spin the wafer until the

solvent is distributed across the ~~wafer~~ front surface of the wafer;

upon distributing the solvent, dispensing the photo resist solution on the wafer
surface;

actuating the rotatable wafer-holding mechanism to spin the wafer until the photo resist solution is distributed; and

upon distributing the photo resist material, dispensing the solvent from the first

nozzle ~~for to remove an edge bead removal~~ and dispensing the solvent

from the second nozzle ~~for cleaning~~ to clean the back surface of the wafer;

and

~~actuating the rotatable wafer holding mechanism to spin the wafer until the photo resist solution is distributed across the wafer surface.~~

23. (Canceled)

24. (Currently Amended) An apparatus, comprising:

a rotatable wafer-holding mechanism to hold a wafer having a wafer edge and a wafer side, a wafer back surface, and a wafer top surface;

a solvent dispense head in fluid communication with a source of a photo resist solution and further in fluid communication with a solvent source containing a solvent that includes diacetone alcohol, wherein the solvent dispense head includes:

a first nozzle in fluid communication with ~~the source of the photo resist solution~~
the solvent source, the first nozzle being directed at a the wafer edge and a the wafer side;

a second nozzle in fluid communication with ~~the source of the photo resist solution~~
the solvent source, the second nozzle being directed at a the wafer back surface; and

a third nozzle in fluid communication with the solvent source, the third nozzle being directed at a center of a the wafer top surface; and

~~a rotatable wafer-holding mechanism; and~~

a logic control unit to execute a process to coat a the wafer, wherein the process comprises:

distributing the solvent on ~~a wafer surface~~ the wafer using the third nozzle and
rotating the wafer-holding mechanism; and

upon distributing the solvent, distributing the photo resist solution on the wafer ~~surface~~ using the first and second nozzles; and

upon distributing the photo resist solution, dispensing the solvent through the first nozzle and the second nozzle.

25. (Canceled)

26. (Currently Amended) The apparatus of claim 24, wherein, in the process performed by the logic control unit, distributing the solvent on the wafer ~~surface~~ using the third nozzle comprises:

dispensing the solvent at the center on the wafer top surface; and

E1
ctrl

actuating the rotatable wafer-holding mechanism to spin the wafer until the ~~prewet~~ solvent is distributed across the wafer surface.

27. (Previously Added) The apparatus of claim 24, wherein, in the process performed by the logic control unit, distributing the photo resist solution on the wafer surface comprises:

dispensing the photo resist solution on the wafer; and

actuating the rotatable wafer-holding mechanism to spin the wafer until the photo resist solution is distributed across the wafer surface.

28. (Canceled)

29. (Currently Amended) The apparatus of claim ~~28~~ 24, wherein:

the photo resist solution comprises a resin, a photoactive compound and a photo resist solvent; and

the photo resist solvent contained within the photo resist solution includes the solvent from the solvent source.

30. (Canceled)

31. (Currently Amended) The apparatus of claim ~~28~~ 24, wherein ~~the process adapted to be executed by the logic control unit further~~ dispensing the solvent through the first nozzle and the second nozzle includes dispensing solvent to remove edge beads and to clean the back of the wafer for edge bead removal after the photo resist solution is distributed across the wafer surface.

32-57 (Canceled)

58. (Currently Amended) A system for coating a wafer, comprising:

a bulk solvent container to include a bulk solvent, ~~wherein a bulk solvent contained therein includes diacetone alcohol~~; and

E1
cont'd

a track coating unit coupled to the bulk solvent container, the track coating unit comprising:

a solvent dispense head in fluid communication with the bulk solvent container, including:

a first nozzle ~~in fluid communication with the source of the photo resist solution and directed at the top edge and sides~~ a top edge and side of the wafer for to remove edge beads ~~bead removal~~;

a second nozzle ~~in fluid communication with the source of the photo resist solution and~~ directed at the back of the wafer to clean the wafer; and

a third nozzle ~~in fluid communication with the solvent source~~ directed at ~~the~~ a top center of the wafer to prewet the wafer;

a rotatable base for mounting the wafer; and

a logic control unit to execute a process to coat a wafer, wherein the process comprises:

dispensing the bulk solvent on a wafer surface using the third nozzle;

spinning the wafer on the rotatable base until the bulk solvent is distributed across the wafer surface;

dispensing photo resist solution on the wafer;

spinning the wafer until the photo resist solution is distributed across the wafer surface; and

dispensing the bulk solvent on the edge and sides of the wafer using the first nozzle and on the back of the wafer using the second nozzle for edge bead removal and cleanup after distributing the photo resist.

59. (Currently Amended) The system of claim 58, wherein ~~the solvent dispense head comprises nozzles, and~~ the track coating unit further comprises solenoids coupled to the logic control unit for controlling the flow through the nozzles.

E1
conf'd

AMENDMENT AND RESPONSE UNDER 37 CFR § 1.116 – EXPEDITED PROCEDURE

Serial Number: 09/941476

Filing Date: August 29, 2001

Title: A SOLVENT PREWET AND METHOD TO DISPENSE THE SOLVENT PREWET

Page 6

Dkt: 303.254US4

60-61 (Canceled)

EI
contd